

=> file agricola biosis caplus caba

C=> s aiaa

L1 126 AIIA

=> duplicate remove l1

L2 85 DUPLICATE REMOVE L1 (41 DUPLICATES REMOVED)

=> d ti 1-25

L2 ANSWER 1 OF 85 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI The Ti plasmid of Agrobacterium tumefaciens harbors an attM-paralogous
gene, aiiB, also encoding N-Acyl homoserine lactonase activity.

L2 ANSWER 2 OF 85 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI The antiproteinuric effect of losartan is systemic blood pressure
dependent.

L2 ANSWER 3 OF 85 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI AhlD, an N-acylhomoserine lactonase in Arthrobacter sp., and predicted
homologues in other bacteria.

L2 ANSWER 4 OF 85 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Effect of angiotensin II receptor antagonism on cerebral vasomotor reserve
in humans.

L2 ANSWER 5 OF 85 CAPLUS COPYRIGHT 2004 ACS on STN
TI Erythropoietin requirements: a comparative multicenter study between
peritoneal dialysis and hemodialysis

L2 ANSWER 6 OF 85 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Efficacy and tolerability of nilvadipine in combination with an
angiotensin II receptor antagonist in patients with essential
hypertension: A multicenter, open-label, uncontrolled study.

L2 ANSWER 7 OF 85 CAPLUS COPYRIGHT 2004 ACS on STN
TI Drugs that interrupt the renin-angiotensin system should be among the
preferred initial drugs to treat hypertension

L2 ANSWER 8 OF 85 CAPLUS COPYRIGHT 2004 ACS on STN
TI Effects of PEG-hirudin in clotting parameters and platelet function and
its interaction with aspirin in healthy volunteers

L2 ANSWER 9 OF 85 AGRICOLA Compiled and distributed by the National
Agricultural Library of the Department of Agriculture of the United States
of America. It contains copyrighted materials. All rights reserved.
(2004) on STN DUPLICATE 6

TI Degradation of pathogen quorum-sensing molecules by soil bacteria: a
preventive and curative biological control mechanism.

L2 ANSWER 10 OF 85 CAPLUS COPYRIGHT 2004 ACS on STN
TI ACE inhibitors (ACEi) and angiotensin II receptor antagonists (
AIIA): which drugs are suitable?

L2 ANSWER 11 OF 85 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Cloning and ecological significance of ***aiiA*** from Bacillus cereus
UW85.

L2 ANSWER 12 OF 85 CAPLUS COPYRIGHT 2004 ACS on STN
TI Method for controlling pathogenic bacterial quorum-sensing by ***aiiA***
gene expression in transgenic tobacco and potato plants

STN

L2 ANSWER 13 OF 85 AGRICOLA Compiled and distributed by the National
 Agricultural Library of the Department of Agriculture of the United States
 of America. It contains copyrighted materials. All rights reserved.
 (2004) on STN DUPLICATE 7

TI Genes encoding the N-acyl homoserine lactone-degrading enzyme are
 widespread in many subspecies of *Bacillus thuringiensis*.

L2 ANSWER 14 OF 85 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Comparative effects of candesartan and enalapril on left ventricular
 hypertrophy in patients with essential hypertension: The candesartan
 assessment in the treatment of cardiac hypertrophy (CATCH) study.

L2 ANSWER 15 OF 85 AGRICOLA Compiled and distributed by the National
 Agricultural Library of the Department of Agriculture of the United States
 of America. It contains copyrighted materials. All rights reserved.
 (2004) on STN DUPLICATE 9

TI Identification of quorum-quenching N-acyl homoserine lactonases from
Bacillus species.

L2 ANSWER 16 OF 85 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI A retrospective, population-based analysis of persistence with
 antihypertensive drug therapy in primary care practice in Italy.

L2 ANSWER 17 OF 85 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Genetically programmed autoinducer destruction reduces virulence gene
 expression and swarming motility in *Pseudomonas aeruginosa* PA01.

L2 ANSWER 18 OF 85 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Pharmacokinetic and pharmacodynamic characterization of a
 medium-molecular-weight heparin in comparison with UFH and LMWH

L2 ANSWER 19 OF 85 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Angiotensin II and IGF-I may interact to regulate tubulointerstitial cell
 kinetics and phenotypic changes in hypertensive rats

L2 ANSWER 20 OF 85 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Pharmacokinetics of phosphopentomannan sulfate (PI-88) in a non-human
 primate model: Clinical implications for therapeutic drug monitoring.

L2 ANSWER 21 OF 85 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Angiotensin-converting enzyme inhibitors and angiotensin receptor
 antagonists in diabetic renal disease

L2 ANSWER 22 OF 85 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Improving the managed care of hypertension with angiotensin II
 antagonists.

L2 ANSWER 23 OF 85 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Optimization of the Dosing of Tinzaparin for Surgial and Interventional
 Dosing Correlation of ACT and TEG Results.

L2 ANSWER 24 OF 85 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Heparinase Digestion of Tinzaparin: A Novel Approach to Neutralize the
 Anticoagulant and Potential Hemorrhagic Effects of Low Molecular Weight
 Heparin.

L2 ANSWER 25 OF 85 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Cloning of a *Bacillus* autoinducer inactivation protein ***AiiA*** gene
 and its mutagenesis and expression for agricultural application

=> s l2 not Angiotensin

L3 38 L2 NOT ANGIOTENSIN

=> d ti 1-38

- L3 ANSWER 1 OF 38 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2004) on STN
- TI Degradation of pathogen quorum-sensing molecules by soil bacteria: a preventive and curative biological control mechanism.
- L3 ANSWER 2 OF 38 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2004) on STN
- TI Genes encoding the N-acyl homoserine lactone-degrading enzyme are widespread in many subspecies of *Bacillus thuringiensis*.
- L3 ANSWER 3 OF 38 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2004) on STN
- TI Identification of quorum-quenching N-acyl homoserine lactonases from *Bacillus* species.
- L3 ANSWER 4 OF 38 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2004) on STN
- TI ***AiiA***, an enzyme that inactivates the acylhomoserine lactone quorum-sensing signal and attenuates the virulence of *Erwinia carotovora*.
- L3 ANSWER 5 OF 38 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
- TI Cloning and ecological significance of ***aiiA*** from *Bacillus cereus* UW85.
- L3 ANSWER 6 OF 38 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
- TI The Ti plasmid of *Agrobacterium tumefaciens* harbors an attM-paralogous gene, *aiiB*, also encoding N-Acyl homoserine lactonase activity.
- L3 ANSWER 7 OF 38 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
- TI Heparinase Digestion of Tinzaparin: A Novel Approach to Neutralize the Anticoagulant and Potential Hemorrhagic Effects of Low Molecular Weight Heparin.
- L3 ANSWER 8 OF 38 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
- TI Optimization of the Dosing of Tinzaparin for Surgical and Interventional Dosing Correlation of ACT and TEG Results.
- L3 ANSWER 9 OF 38 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
- TI AhlD, an N-acylhomoserine lactonase in *Arthrobacter* sp., and predicted homologues in other bacteria.
- L3 ANSWER 10 OF 38 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
- TI Pharmacokinetics of phosphopentomannan sulfate (PI-88) in a non-human primate model: Clinical implications for therapeutic drug monitoring.
- L3 ANSWER 11 OF 38 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
- TI Genetically programmed autoinducer destruction reduces virulence gene expression and swarming motility in *Pseudomonas aeruginosa* PA01.
- L3 ANSWER 12 OF 38 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
- TI Monitoring of high dosage of low-molecular-weight heparins: Implications in the treatment and interventional indications.

L3 ANSWER 13 OF 38 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Pharmacokinetics of phosphopentomannan sulfate (PI-88) in a non-human
 primate model: Clinical implications for therapeutic drug monitoring.

L3 ANSWER 14 OF 38 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Quenching quorum sensing-dependent bacterial infection.

L3 ANSWER 15 OF 38 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Comparative pharmacokinetics and pharmacodynamics of Tinzaparin and
 unfractionated heparin at a fixed dosage (75 U/kg) in primates.

L3 ANSWER 16 OF 38 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Measurement of a novel synthetic anticoagulant oligosaccharide in normal
 human plasma by ecarin clotting time supplemented with heparin cofactor
 II.

L3 ANSWER 17 OF 38 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Comparative pharmacokinetics and pharmacodynamics of Tinzaparin and
 unfractionated heparin at a fixed dosage (75U/kg) in primates.

L3 ANSWER 18 OF 38 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Plasma levels of total and free tissue factor pathway inhibitor (TFPI) as
 individual pharmacological parameters of various heparins.

L3 ANSWER 19 OF 38 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Alzheimer-type I astroglia (AIA) and its implications for dynamic
 plasticity of astroglia: A historical review of the significance of AIA.

L3 ANSWER 20 OF 38 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Comparative pharmacokinetics of LMWHs.

L3 ANSWER 21 OF 38 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Antithrombotic activity of para-aminobenzoic acid.

L3 ANSWER 22 OF 38 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Allelotype analysis (***AIIA***) of adult acute myelogenous leukemia
 (AML) using microsatellite pattern: Clinical and biological correlations.

L3 ANSWER 23 OF 38 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Absolute and comparative subcutaneous bioavailability of ardeparin sodium,
 a low molecular weight heparin.

L3 ANSWER 24 OF 38 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Comparison of the pharmacodynamic and pharmacokinetic profiles of two
 low-molecular-mass heparins in rats.

L3 ANSWER 25 OF 38 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI High intensity social conflict in the Swiss albino mouse induces analgesia
 modulated by 5-HT-1A receptors.

L3 ANSWER 26 OF 38 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI The dose proportionality of the pharmacokinetics of ardeparin, a low
 molecular weight heparin, in healthy volunteers.

L3 ANSWER 27 OF 38 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Synthesis of a N'-alkylamine anticoagulant active low-molecular-mass
 heparin for radioactive and fluorescent labeling.

L3 ANSWER 28 OF 38 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI The alliance for inmates with AIDS (***AIIA***): An effective model
 for HIV/AIDS education, prevention, treatment, advocacy, and empowerment
 in prison and release.

L3 ANSWER 29 OF 38 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI PHARMACOKINETICS OF A LOW MOLECULAR WEIGHT HEPARIN LOGIPARIN AFTER
 INTRAVENOUS AND SUBCUTANEOUS ADMINISTRATION TO HEALTHY VOLUNTEERS.

L3 ANSWER 30 OF 38 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI NOVEL ALPHA HEMOGLOBIN HAPLOTYPES IN HORSES.

L3 ANSWER 31 OF 38 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Effects of PEG-hirudin in clotting parameters and platelet function and
 its interaction with aspirin in healthy volunteers

L3 ANSWER 32 OF 38 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Pharmacokinetic and pharmacodynamic characterization of a
 medium-molecular-weight heparin in comparison with UFH and LMWH

L3 ANSWER 33 OF 38 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Method for controlling pathogenic bacterial quorum-sensing by ***aiiA***
 gene expression in transgenic tobacco and potato plants

L3 ANSWER 34 OF 38 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Synthetic heparin pentasaccharide depolymerization by heparinase I:
 Molecular and biological implications

L3 ANSWER 35 OF 38 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Cloning of a Bacillus autoinducer inactivation protein ***AiiA*** gene
 and its mutagenesis and expression for agricultural application

L3 ANSWER 36 OF 38 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Comparison of the pharmacokinetic profiles of three low-molecular-mass
 heparins-dalteparin, enoxaparin and nadroparin-administered subcutaneously
 in healthy volunteers (doses for prevention of thromboembolism)

L3 ANSWER 37 OF 38 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Reactions in the system calcium sulfate-water and on sodium-polyhalite
 $\text{Na}_2\text{Ca}_5(\text{SO}_4)_6(\text{H}_2\text{O})_3$

L3 ANSWER 38 OF 38 CABA COPYRIGHT 2004 CABI on STN
 TI Quieting the raucous crowd.

=> d bib abs 35 33 1 2 3 5 6 9 11 14

L3 ANSWER 35 OF 38 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 2001:31654 CAPLUS
 DN 134:96283
 TI Cloning of a Bacillus autoinducer inactivation protein ***AiiA*** gene
 and its mutagenesis and expression for agricultural application
 IN Zhang, Lian-Hui; Dong, Yihu; Xu, Jinling
 PA Institute of Molecular Agrobiolgy of 1 Research Link, Singapore
 SO PCT Int. Appl., 49 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001002578	A1	20010111	WO 1999-SG128	19991117
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ,				

MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

SG 91822 A1 20021015 SG 1999-3146 19990702
BR 9917419 A 20020402 BR 1999-17419 19991117
EP 1192256 A1 20020403 EP 1999-958619 19991117

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO

JP 2003504028 T2 20030204 JP 2001-508350 19991117
NO 2001006397 A 20020221 NO 2001-6397 20011227

PRAI SG 1999-3146 A 19990702
WO 1999-SG128 W 19991117

AB Disclosed are a Bacillus autoinducer inactivation protein (***AiiA***)
gene isolated from Bacillus sp. 240B1 capable of enzymic inactivation of
N-acylhomoserine lactones, known as autoinducers (AIs), which are involved
in the regulation of pathogenic gene expression in the plants. Sequence
alignment indicates that ***AiiA*** contains a "HXHDXH" zinc-binding
motif that is conserved in several groups of metallohydrolases.
Site-directed mutagenesis showed that conserved aspartate and most
histidine residues are required for ***AiiA*** activity. Expression
of ***aiiA*** in transformed Erwinia carotovora strain SCG1
significantly reduces the release of AI, decreases extracellular
pectolytic enzyme activities, and attenuates pathogenicity on potato,
eggplant, Chinese cabbage, carrot, celery, cauliflower, and tobacco.
These results indicate that the AI-inactivation approach represents a
promising strategy for prevention of diseases in which virulence is
regulated by AIs.

RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 33 OF 38 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:595023 CAPLUS
DN 137:152497

TI Method for controlling pathogenic bacterial quorum-sensing by ***aiiA***
gene expression in transgenic tobacco and potato plants
IN Zhang, Lianhui; Dong, Yihu; Xu, Jinling; Zhang, Xifen
PA Institute of Molecular Agrobiolgy, Singapore
SO PCT Int. Appl., 38 pp.
CODEN: PIXXD2

DT Patent
LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002061099	A1	20020808	WO 2001-SG12	20010129
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
EP 1358340	A1	20031105	EP 2001-906508	20010129
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			

PRAI WO 2001-SG12 W 20010129

AB Transgenic plants, protected from bacterial pathogens which harbor the
aiiA gene or a functional fragment or modification thereof and
express functional ***AiiA*** protein (autoinducer inactivation
protein) were produced. The plants and plant materials of this invention

inactivate bacterial pathogen quorum-sensing signal mols., thereby eliminating or reducing the prodn. of bacterial virulence factors which are harmful to plant cells and tissues.

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L3 ANSWER 1 OF 38 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2004) on STN
- AN 2003:50558 AGRICOLA
DN IND23339116
TI Degradation of pathogen quorum-sensing molecules by soil bacteria: a preventive and curative biological control mechanism.
AU Molina, L.; Constantinescu, F.; Michel, L.; Reimann, C.; Duffy, B.; Defago, G.
AV DNAL (QR100.F45)
SO FEMS microbiology ecology, July 1, 2003. Vol. 45, No. 1. p. 71-81
Publisher: Amsterdam, The Netherlands : Elsevier Science B.V.
CODEN: FMECEZ; ISSN: 0168-6496
- NTE Includes references
CY Netherlands
DT Article
FS Non-U.S. Imprint other than FAO
LA English
AB The plasmid pME6863, carrying the ***aiiA*** gene from the soil bacterium *Bacillus* sp. A24 that encodes a lactonase enzyme able to degrade N-acyl-homoserine lactones (AHLs), was introduced into the rhizosphere isolate *Pseudomonas fluorescens* P3. This strain is not an effective biological control agent against plant pathogens. The transformant *P. fluorescens* P3/pME6863 acquired the ability to degrade AHLs. In planta, *P. fluorescens* P3/pME6863 significantly reduced potato soft rot caused by *Erwinia carotovora* and crown gall of tomato caused by *Agrobacterium tumefaciens* to a similar level as *Bacillus* sp. A24. Little or no disease reduction was observed for the wild-type strain P3 carrying the vector plasmid without ***aiiA***. Suppression of potato soft rot was observed even when the AHL-degrading *P. fluorescens* P3/pME6863 was applied to tubers 2 days after the pathogen, indicating that biocontrol was not only preventive but also curative. When antagonists were applied individually with the bacterial plant pathogens, biocontrol activity of the AHL degraders was greater than that observed with several *Pseudomonas* 2,4-diacetylphloroglucinol-producing strains and with *Pseudomonas chlororaphis* PCL1391, which relies on production of phenazine antibiotic for disease suppression. Phenazine production by this well characterized biological control strain *P. chlororaphis* PCL1391 is regulated by AHL-mediated quorum sensing. When *P. chlororaphis* PCL1391 was co-inoculated with *P. fluorescens* P3/pME6863 in a strain mixture, the AHL degrader interfered with the normally excellent ability of the antibiotic producer to suppress tomato vascular wilt caused by *Fusarium oxysporum* f. sp. *lycopersici*. Our results demonstrate AHL degradation as a novel biocontrol mechanism, but also demonstrate the potential for non-target interactions that can interfere with the biocontrol efficacy of other strains.
- L3 ANSWER 2 OF 38 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.
(2004) on STN
- AN 2003:36775 AGRICOLA
DN IND23327975
TI Genes encoding the N-acyl homoserine lactone-degrading enzyme are widespread in many subspecies of *Bacillus thuringiensis*.
AU Lee, S.J.; Park, S.Y.; Lee, J.J.; Yum, D.Y.; Koo, B.T.; Lee, J.K.

AV DNAL (448.3 Ap5)
 SO Applied and environmental microbiology, Aug 2002. Vol. 68, No. 8. p. 3919-3924
 Publisher: Washington : American Society for Microbiology
 CODEN: AEMIDF; ISSN: 0099-2240
 NTE Includes references
 CY District of Columbia; United States
 DT Article
 FS U.S. Imprints not USDA, Experiment or Extension
 LA English
 AB Gram-negative bacteria can communicate with each other by N-acyl homoserine lactones (AHLs), which are quorum-sensing autoinducers. Recently, the ***aiiA*** gene (encoding an enzyme catalyzing the degradation of AHL) has been cloned from *Bacillus* sp. strain 240B1. During investigations in the course of the ongoing *Bacillus thuringiensis* subsp. *morrisoni* genome project, an ***aiiA*** homologue gene in the genome sequence was found. These results led to consideration of the possibility of the widespread existence of the gene in *B. thuringiensis*. ***aiiA*** homologue genes were found in 16 subspecies of *B. thuringiensis*, and their sequences were determined. Comparison of the *Bacillus* sp. strain 240B1 ***aiiA*** gene with the *B. thuringiensis* ***aiiA*** homologue gene showed high homologies of 89 to 95% and 90 to 96% in the nucleotide sequence and deduced amino acid sequence, respectively. Among the subspecies of *B. thuringiensis* having an ***aiiA*** gene, the subspecies *aizawai*, *galleriae*, *kurstaki*, *kyushuensis*, *ostrinae*, and *subtoxici* were shown to degrade AHL. It was observed that recombinant *Escherichia coli* producing ***AiiA*** proteins also had AHL-degrading activity and could also attenuate the plant pathogenicity of *Erwinia carotovora*. These results indicate that insecticidal *B. thuringiensis* strains might have potential to compete with gram-negative bacteria in natural ecosystems by autoinducer-degrading activity.

L3 ANSWER 3 OF 38. AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN
 AN 2002:50280 AGRICOLA
 DN IND23280464
 TI Identification of quorum-quenching N-acyl homoserine lactonases from *Bacillus* species.
 AU Dong, Y.H.; Gusti, A.R.; Zhang, Q.; Xu, J.L.; Zhang, L.H.
 AV DNAL (448.3 Ap5)
 SO Applied and environmental microbiology, Apr 2002. Vol. 68, No. 4. p. 1754-1759
 Publisher: Washington : American Society for Microbiology
 CODEN: AEMIDF; ISSN: 0099-2240
 NTE Includes references
 CY District of Columbia; United States
 DT Article
 FS U.S. Imprints not USDA, Experiment or Extension
 LA English
 AB A range of gram-negative bacterial species use N-acyl homoserine lactone (AHL) molecules as quorum-sensing signals to regulate different biological functions, including production of virulence factors. AHL is also known as an autoinducer. An autoinducer inactivation gene, ***aiiA***, coding for an AHL lactonase, was cloned from a bacterial isolate, *Bacillus* sp. strain 240B1. Here we report identification of more than 20 bacterial isolates capable of enzymatic inactivation of AHLs from different sources. Eight isolates showing strong AHL-inactivating enzyme activity were selected for a preliminary taxonomic analysis. Morphological phenotypes and 16S ribosomal DNA sequence analysis indicated that these isolates probably belong to the species *Bacillus thuringiensis*. Enzymatic analysis with known *Bacillus* strains confirmed that all of the strains of *B.*

thuringiensis and the closely related species *B. cereus* and *B. mycoides* tested produced AHL-inactivating enzymes but *B. fusiformis* and *B. sphaericus* strains did not. Nine genes coding for AHL inactivation were cloned either by functional cloning or by a PCR procedure from selected bacterial isolates and strains. Sequence comparison of the gene products and motif analysis showed that the gene products belong to the same family of AHL lactonases.

L3 ANSWER 5 OF 38 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 2003:544558 BIOSIS
DN PREV200300546178
TI Cloning and ecological significance of ***aiiA*** from *Bacillus cereus* UW85.
AU Borlee, B. R. [Reprint Author]; Handelsman, J. [Reprint Author]
CS University of Wisconsin, Madison, WI, USA
SO Abstracts of the General Meeting of the American Society for Microbiology, (2003) Vol. 103, pp. N-213. <http://www.asmta.org/mtgsrc/generalmeeting.htm>. cd-rom.
Meeting Info.: 103rd American Society for Microbiology General Meeting. Washington, DC, USA. May 18-22, 2003. American Society for Microbiology. ISSN: 1060-2011 (ISSN print).
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 19 Nov 2003
Last Updated on STN: 19 Nov 2003
AB Plant health is linked to the diversity of microbes that interact with the plant and the other microbial inhabitants of the rhizosphere. An approach to studying the interactions of these rhizosphere inhabitants is to dissect the communication networks that link them together. Our approach is to disrupt rhizosphere communication that is mediated by acylated homoserine lactones (AHLs). The biocontrol strain *Bacillus cereus* UW85 disrupts quorum-sensing in *Chromobacterium violaceum* CV026 and *Agrobacterium tumefaciens* in vitro. The molecule responsible for the inhibition activity was heat labile and AHLs were not detected in culture supernatants from *B. cereus* UW85. These findings are consistent with those of Dong et al. who discovered that a strain of *Bacillus* sp. produces a lactonase enzyme, ***AiiA***, which inactivates AHLs. The *B. anthracis* genome contains a homolog of ***aiiA*** (<http://tigrblast.tigr.org/ufmg/>). We designed PCR primers using the available sequences to detect, clone, and sequence a homolog from the *B. cereus* UW85 genome. When the *B. cereus* UW85 homolog was expressed in *E. coli*, the resulting clones inhibited quorum-sensing. Sequence analysis of the *B. cereus* UW85 homolog revealed an 88% sequence identity with ***aiiA*** from *Bacillus* sp. 240B1. A DIG-labeled probe was used to identify a clone containing an ***aiiA*** homolog within a bacterial artificial chromosome (BAC) library of UW85 genomic DNA. A 3-Kb region of this clone was sequenced and used to construct an in-frame deletion and a tetracycline insertion in ***aiiA*** in *B. cereus* UW85. A mutant analysis addressing the ecological role of ***aiiA*** in the rhizosphere community is underway.

L3 ANSWER 6 OF 38 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 2003:479042 BIOSIS
DN PREV200300479042
TI The Ti plasmid of *Agrobacterium tumefaciens* harbors an attM-paralogous gene, *aiiB*, also encoding N-Acyl homoserine lactonase activity.
AU Carrier, A.; Uroz, S.; Smadja, B.; Fray, R.; Latour, X.; Dessaux, Y.; Faure, D. [Reprint Author]
CS Centre National de la Recherche Scientifique, Institut des Sciences du Végétal, UPR2355, Av. de la Terrasse, 91 198, Gif-sur-Yvette Cedex, France faure@isv.cnrs-gif.fr
SO Applied and Environmental Microbiology, (August 2003) Vol. 69, No. 8, pp.

4989-4993. print.
ISSN: 0099-2240 (ISSN print).

DT Article
LA English
ED Entered STN: 15 Oct 2003

Last Updated on STN: 15 Oct 2003

AB The *Agrobacterium tumefaciens* C58 genome contains three putative N-acyl homoserine lactone (acyl-HSL) hydrolases, which are closely related to the lactonase ***AiiA*** of *Bacillus*. When expressed in *Escherichia coli*, two of the putative acyl-HSL hydrolases, AttM and AiiB, conferred the ability to degrade acyl-HSLs on the host. In *Erwinia* strain 6276, the lactonases reduced the endogenous acyl-HSL level and the bacterial virulence in planta.

L3 ANSWER 9 OF 38 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 2003:345253 BIOSIS
DN PREV200300345253

TI AhlD, an N-acylhomoserine lactonase in *Arthrobacter* sp., and predicted homologues in other bacteria.

AU Park, Sun-Yang; Lee, Sang Jun; Oh, Tae-Kwang; Oh, Jong-Won; Koo, Bon-Tag; Yum, Do-Young [Reprint Author]; Lee, Jung-Kee [Reprint Author]

CS R and D Center, inBioNET Corporation, Daejeon, 305-390, South Korea
dyyum@inbionet.com; jklee@kribb.re.kr

SO Microbiology (Reading), (June 2003) Vol. 149, No. 6, pp. 1541-1550. print.
ISSN: 1350-0872 (ISSN print).

DT Article
LA English
ED Entered STN: 23 Jul 2003

Last Updated on STN: 23 Jul 2003

AB Quorum sensing is a signalling mechanism that controls diverse biological functions, including virulence, via N-acylhomoserine lactone (AHL) signal molecules in Gram-negative bacteria. With the aim of isolating strains or enzymes capable of blocking quorum sensing by inactivating AHL, bacteria were screened for AHL degradation by their ability to utilize N-3-oxohexanoyl-L-homoserine lactone (OHHL) as the sole carbon source. Among four isolates, strain IBN110, identified as *Arthrobacter* sp., was found to grow rapidly on OHHL, and to degrade various AHLs with different lengths and acyl side-chain substitutions. Co-culture of *Arthrobacter* sp. IBN110 and the plant pathogen *Erwinia carotovora* significantly reduced both the AHL amount and pectate lyase activity in co-culture medium, suggesting the possibility of applying *Arthrobacter* sp. IBN110 in the control of AHL-producing pathogenic bacteria. The *ahlD* gene from *Arthrobacter* sp. IBN110 encoding the enzyme catalysing AHL degradation was cloned, and found to encode a protein of 273 amino acids. A mass spectrometry analysis showed that AhlD probably hydrolyses the lactone ring of N-3-hexanoyl-L-homoserine lactone, indicating that AhlD is an N-acylhomoserine lactonase (AHLase). A comparison of AhlD with other known AHL-degrading enzymes, *Bacillus* sp. 240B1 ***AiiA***, a *Bacillus thuringiensis* subsp. *kyushuensis* ***AiiA*** homologue and *Agrobacterium tumefaciens* AttM, revealed 25, 26 and 21 0% overall identities, respectively, in the deduced amino acid sequences. Although these identities were relatively low, the HXDHapprxeqHapprxeqD motif was conserved in all the AHLases, suggesting that this motif is essential for AHLase activity. From a genome database search based on the conserved motif, putative AhlD-like lactonase genes were found in several other bacteria, and AHL-degrading activities were observed in *Klebsiella pneumoniae* and *Bacillus stearothermophilus*. Furthermore, it was verified that *ahlK*, an *ahlD* homologue, encodes an AHL-degrading enzyme in *K. pneumoniae*. Accordingly, the current results suggest the possibility that AhlD-like AHLases could exist in many other micro-organisms.

L3 ANSWER 11 OF 38 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 2002:305188 BIOSIS

DN PREV200200305188
 TI Genetically programmed autoinducer destruction reduces virulence gene expression and swarming motility in *Pseudomonas aeruginosa* PAO1.
 AU Reimmann, Cornelia [Reprint author]; Ginet, Nathalie; Michel, Laurent; Keel, Christoph; Michaux, Patrick; Krishnapillai, Viji; Zala, Marcello; Heurlier, Karin; Triandafillu, Karine; Harms, Hauke; Defago, Genevieve; Haas, Dieter
 CS Laboratoire de Biologie Microbienne, Universite de Lausanne, CH-1015, Lausanne, Switzerland
 Cornelia.Reimmann@lbm.unil.ch
 SO Microbiology (Reading), (April, 2002) Vol. 148, No. 4, pp. 923-932. print. ISSN: 1350-0872.
 DT Article
 LA English
 ED Entered STN: 22 May 2002
 Last Updated on STN: 22 May 2002
 AB Virulence in the opportunistic human pathogen *Pseudomonas aeruginosa* is controlled by cell density via diffusible signalling molecules ('autoinducers') of the N-acylhomoserine lactone (AHL) type. Two *Bacillus* sp. isolates (A23 and A24) with AHL-degrading activity were identified among a large collection of rhizosphere bacteria. From isolate A24 a gene was cloned which was similar to the ***aiiA*** gene, encoding an AHL lactonase in another *Bacillus* strain. Expression of the ***aiiA*** homologue from isolate A24 in *P. aeruginosa* PAO1 reduced the amount of the quorum sensing signal N-oxododecanoyl-L-homoserine lactone and completely prevented the accumulation of the second AHL signal, N-butyryl-L-homoserine lactone. This strongly reduced AHL content correlated with a markedly decreased expression and production of several virulence factors and cytotoxic compounds such as elastase, rhamnolipids, hydrogen cyanide and pyocyanin, and strongly reduced swarming. However, no effect was observed on flagellar swimming or on twitching motility, and ***aiiA*** expression did not affect bacterial adhesion to a polyvinylchloride surface. In conclusion, introduction of an AHL degradation gene into *P. aeruginosa* could block cell-cell communication and exoproduct formation, but failed to interfere with surface colonization.

L3 ANSWER 14 OF 38 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 2001:443330 BIOSIS
 DN PREV200100443330
 TI Quenching quorum sensing-dependent bacterial infection.
 AU Lian-Hui, Z. [Reprint author]
 CS Institute of Molecular Agrobiolgy, National University of Singapore, Singapore, Singapore
 SO Phytopathology, (June, 2001) Vol. 91, No. 6 Supplement, pp. S160. print. Meeting Info.: Joint Meeting of the American Phytopathological Society, the Mycological Society of America, and the Society of Nematologists. Salt Lake City, Utah, USA. August 25-29, 2001. American Phytopathological Society; Mycological Society of America; Society of Nematologists. CODEN: PHYTAJ. ISSN: 0031-949X.
 DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 LA English
 ED Entered STN: 19 Sep 2001
 Last Updated on STN: 22 Feb 2002
 AB Bacterial cells sense their population density via a sophisticated cell-cell communication system, and trigger expression of particular genes when the density reaches a threshold. This type of gene regulation, which controls diverse biological functions including virulence, is known as quorum sensing. Quorum-sensing signals, such as acyl-homoserine lactones (AHLs), are the essential components of the systems. AHLs regulate virulence gene expression in a range of plant and animal (including human) bacterial pathogens. It appears that single-celled bacterial pathogens use quorum-sensing signals to synchronize virulence gene expression among

family members as a concerted means to overwhelm host defenses. Quorum-sensing system thus represents a fascinating target for development of novel antipathogenic approaches. Recently, we showed that the

aiiA gene from a gram-positive *Bacillus* sp. 240B1 encoded an enzyme capable of inactivating several AHLs. To test the feasibility of establishing a generic "quorum quenching" approach to control bacterial infection, i.e., to paralyze quorum-sensing systems of bacterial pathogens via inactivation of quorum-sensing signals, we have tested the effect of

AiiA on different AHL signals, and introduced ***aiiA*** to potato and tobacco plants. The results on characterization of ***AiiA*** inactivation of AHL signals and the effect of the enzyme on bacterial infection will be presented.

=> s N-acyl homoserine lactone

L4 254 N-ACYL HOMOSERINE LACTONE

=> duplicate remove l4

L5 134 DUPLICATE REMOVE L4 (120 DUPLICATES REMOVED)

=> d ti 1-25

L5 ANSWER 1 OF 134 CAPLUS COPYRIGHT 2004 ACS on STN

TI Burkholderia mallei and Burkholderia pseudomallei AHL synthases as vaccine and for diagnosis of glanders/melioidosis

L5 ANSWER 2 OF 134 CAPLUS COPYRIGHT 2004 ACS on STN

TI Biofilms, homoserine lactones and biocide susceptibility

L5 ANSWER 3 OF 134 CAPLUS COPYRIGHT 2004 ACS on STN

TI Treatment of surfaces populated by bacteria

L5 ANSWER 4 OF 134 CAPLUS COPYRIGHT 2004 ACS on STN

TI Synergistic compositions of N-acyl homoserine lactones and 4-quinolones

L5 ANSWER 5 OF 134 CAPLUS COPYRIGHT 2004 ACS on STN

TI Slime scale prevention in boiler cooling water system and slime scale inhibitor

L5 ANSWER 6 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

TI Proteomic analysis of wild-type *Sinorhizobium meliloti* responses to
N - ***acyl*** ***homoserine*** ***lactone***
quorum-sensing signals and the transition to stationary phase.

L5 ANSWER 7 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

TI The Ti plasmid of *Agrobacterium tumefaciens* harbors an attM-paralogous gene, aiiB, also encoding N-Acyl homoserine lactonase activity.

L5 ANSWER 8 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

TI Identification and characterization of a GDSL esterase gene located proximal to the swr quorum-sensing system of *Serratia liquefaciens* MG1.

L5 ANSWER 9 OF 134 CAPLUS COPYRIGHT 2004 ACS on STN

TI The CepIR quorum sensing system contributes to the virulence of *Burkholderia cenocepacia* respiratory infections

L5 ANSWER 10 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

TI Secondary metabolites of *Flustra foliacea* and their influence on bacteria.

L5 ANSWER 11 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

TI Quorum-sensing system and stationary-phase sigma factor (rpoS) of the onion pathogen *Burkholderia cepacia* genomovar I type strain, ATCC 25416.

- L5 ANSWER 12 OF 134 AGRICOLA Compiled and distributed by the National
 Agricultural Library of the Department of Agriculture of the United States
 of America. It contains copyrighted materials. All rights reserved.
 (2004) on STN DUPLICATE 6
- TI Extensive and specific responses of a eukaryote to bacterial
 quorum-sensing signals.
- L5 ANSWER 13 OF 134 CAPLUS COPYRIGHT 2004 ACS on STN
- TI Identification of quorum-sensing regulated proteins in the opportunistic
 pathogen *Pseudomonas aeruginosa* by proteomics
- L5 ANSWER 14 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
- TI GacA, the response regulator of a two-component system, acts as a master
 regulator in *Pseudomonas syringae* pv. tomato DC3000 by controlling
 regulatory RNA, transcriptional activators, and alternate sigma factors.
- L5 ANSWER 15 OF 134 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 8
- TI Characterization of Pectolytic *Erwinias* as Highly Sophisticated Pathogens
 of plants
- L5 ANSWER 16 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
- TI Acyl-homoserine lactone acylase from *Ralstonia* strain XJ12B represents a
 novel and potent class of quorum-quenching enzymes.
- L5 ANSWER 17 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
- TI Production of substances by *Medicago truncatula* that affect bacterial
 quorum sensing.
- L5 ANSWER 18 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
- TI A LuxR homolog, *aviR*, in *Agrobacterium vitis* is associated with induction
 of necrosis on grape and a hypersensitive response on tobacco.
- L5 ANSWER 19 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
- TI Recipient-induced transfer of the symbiotic plasmid pRL1JI in *Rhizobium*
leguminosarum bv. *viciae* is regulated by a quorum-sensing relay.
- L5 ANSWER 20 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
- TI Chemical identification of ***N*** - ***acyl*** ***homoserine***
 lactone quorum-sensing signals produced by *Sinorhizobium meliloti*
 strains in defined medium.
- L5 ANSWER 21 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
- TI Detection of homoserine lactone-degrading bacteria in the potato
 rhizosphere.
- L5 ANSWER 22 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
- TI Quorum-sensing signal molecule producing pseudomonads from arctic ice and
 water samples.
- L5 ANSWER 23 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
- TI Phosphate availability regulates biosynthesis of two antibiotics,
 prodigiosin and carbapenem, in *Serratia* via both quorum-sensing-dependent
 and -independent pathways.
- L5 ANSWER 24 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
- TI Presence of N-acyl homoserine lactones in soil detected by a whole-cell
 biosensor and flow cytometry.
- L5 ANSWER 25 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
- TI Proteomic analysis of legume-microbe interactions.

L5 ANSWER 18 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 DUPLICATE 10
 AN 2003:345405 BIOSIS
 DN PREV200300345405
 TI A LuxR homolog, *aviR*, in *Agrobacterium vitis* is associated with induction
 of necrosis on grape and a hypersensitive response on tobacco.
 AU Zheng, Desen; Zhang, Hongsheng; Carle, Sigrid; Hao, Guixia; Holden,
 Michele R.; Burr, Thomas J. [Reprint Author]
 CS Department of Plant Pathology, New York State Agricultural Experiment
 Station, Cornell University, Geneva, NY, 14456, USA
 tjb1@cornell.edu
 SO Molecular Plant-Microbe Interactions, (July 2003) Vol. 16, No. 7, pp.
 650-658. print.
 ISSN: 0894-0282 (ISSN print).
 DT Article
 LA English
 ED Entered STN: 23 Jul 2003
 Last Updated on STN: 23 Jul 2003
 AB A Tn5 mutant of *Agrobacterium vitis* F2/5 (M1154) differs from the
 wild-type strain in that it has lost its abilities to cause necrosis on
 grape and a hypersensitive-like response (HR) on tobacco. The Tn5
 insertion occurred in an open reading frame (ORF) *aviR* that is homologous
 to genes encoding the LuxR family of transcriptional regulators, thereby
 suggesting that the HR and necrosis are regulated by a quorum-sensing
 system. Fewer ***N*** - ***acyl*** - ***homoserine***
 lactone autoinducers were detected in extracts from M1154 compare
 with extracts from F2/5 and from *aviR*-complemented M1154. The
 complemented mutant regained full ability to cause grape necrosis and HR.
 Eighteen ORFs located on a 36.6-kb insert in cosmid clone CPB221, which
 includes *aviR*, were sequenced and aligned with homologous genes from *A.*
tumefaciens C58 and *Sinorhizobium meliloti* Rml021. The order of several
 clustered genes is conserved among the bacteria; however, rearrangements
 are also apparent. Reverse transcriptase-polymerase chain reaction
 analysis indicated that ORF2 and ORF14 may be regulated by an *aviR*-encoded
 transcriptional regulator. Single site-directed mutations in each of the
 ORFs, however, had no effect on expression of HR or necrosis as compared
 with the wild-type parent.

L5 ANSWER 15 OF 134 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 8
 AN 2003:904358 CAPLUS
 TI Characterization of Pectolytic *Erwinias* as Highly Sophisticated Pathogens
 of plants
 AU De Boer, Solke H.
 CS Centre for Animal and Plant Health, Canadian Food Inspection Agency,
 Charlottetown, C1A 5T1, Can.
 SO European Journal of Plant Pathology (2003), 109(9), 893-899
 CODEN: EPLPEH; ISSN: 0929-1873
 PB Kluwer Academic Publishers
 DT Journal
 LA English
 AB *Erwinia carotovora* and *Erwinia chrysanthemi* are the two most important
 soft rotting bacteria of com.-grown plants. They are genetically diverse
 as is evident from polymorphisms in the *pel* and *recA* genes as well as in
rrn, the ribosomal gene cluster. Subpopulations grouped into biovars,
 pathovars, or subspecies assocd. with various hosts and in different geog.
 regions suggest specialization in host preference and/or survival in
 diverse environments. Previous characterization of the pectolytic
erwinias as opportunistic pathogens is being replaced by a realization
 that this group of bacteria exhibits a sophisticated repertoire of
 pathogenicity and virulence genes and regulators. The presence of an
 entire *hrp* gene cluster and assocd. type III secretion system, and global
 regulators which regulate virulence determinants such as exoenzyme prodn.

and motility, attest to a highly specialized pathogen. The fact that prodn. of extracellular plant cell wall-degrading enzymes are coordinately activated by the diffusible signal mol. ***N*** - ***acyl*** - ***homoserine*** ***lactone*** in a population d.-dependent manner may explain the occurrence of pectolytic erwinia in asymptomatic plant tissues. Transgenic plants expressing bacterial quorum-sensing signal mols. modulate this sensory system and exhibit resistance to soft rot infection. The pectolytic erwinias, being significant plant pathogens that are neither of quarantine concern nor a human health hazard while readily isolated from field sources, make an ideal model for investigating the genetic basis of plant pathogenesis and environmental fitness.

=> d ti 26-50

- L5 ANSWER 26 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Metabolites from soil bacteria affect plant water relations.
- L5 ANSWER 27 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Quorum sensing in relation to pathogenicity.
Original Title: Bakteriálna bunková komunikácia vo vzťahu k patogenite..
- L5 ANSWER 28 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Quorum-sensing regulation of a hypersensitive response induced by *Agrobacterium vitis*.
- L5 ANSWER 29 OF 134 CAPLUS COPYRIGHT 2004 ACS on STN
TI Molecular radio jamming autoinducer analogs
- L5 ANSWER 30 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Atypical autoinduction of bioluminescence in *Vibrio fischeri* strain ATCC 49387.
- L5 ANSWER 31 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI New insights into regulation by VanT, a *Vibrio harveyi* LuxR-like transcriptional activator, in *Vibrio anguillarum*.
- L5 ANSWER 32 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI FlhDC, the master regulators of flagellar genes, control gacA expression and extracellular protein production in *Erwinia carotovora* ssp. *carotovora*.
- L5 ANSWER 33 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI A role for rhamnolipids and homoserine lactones in biofilm stability maintenance.
- L5 ANSWER 34 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI ***N*** - ***acyl*** - ***homoserine*** ***lactone***
inhibition of rhizobial growth is mediated by two quorum-sensing genes that regulate plasmid transfer.
- L5 ANSWER 35 OF 134 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN
TI Genes encoding the ***N*** - ***acyl*** ***homoserine*** ***lactone***-degrading enzyme are widespread in many subspecies of *Bacillus thuringiensis*.
DUPLICATE 17
- L5 ANSWER 36 OF 134 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN
DUPLICATE 18

TI Identification of quorum-quenching N-acyl homoserine lactonases from *Bacillus* species.
 L5 ANSWER 37 OF 134 CAPLUS COPYRIGHT 2004 ACS on STN
 TI The autoregulatory role of EsaR, a quorum-sensing regulator in *Pantoea stewartii* ssp. *stewartii*: evidence for a repressor function
 L5 ANSWER 38 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI New synthetic analogues of N-acyl homoserine lactones as agonists or antagonists of transcriptional regulators involved in bacterial quorum sensing.
 L5 ANSWER 39 OF 134 CAPLUS COPYRIGHT 2004 ACS on STN
 TI The control method of quorum sensing in gram-negative bacteria
 L5 ANSWER 40 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Interspecies communication between *Burkholderia cepacia* and *Pseudomonas aeruginosa*.
 L5 ANSWER 41 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Toward an understanding of microbial communities through analysis of communication networks.
 L5 ANSWER 42 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Organic compounds in *Cinnamomum cassia* reduce biofilm formation and AHL-mediated signaling by *Escherichia coli* ATCC 33456.
 L5 ANSWER 43 OF 134 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN DUPLICATE 21
 TI Evidence of quorum sensing in the rumen ecosystem: detection of ***N*** - ***acyl*** ***homoserine*** ***lactone*** autoinducers in ruminal contents.
 L5 ANSWER 44 OF 134 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Comparison of bioluminescence-based methods for detecting bacterial quorum sensing molecules in *Pseudomonas fluorescens*
 L5 ANSWER 45 OF 134 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN DUPLICATE 22
 TI Quorum sensing in plant-associated bacteria.
 L5 ANSWER 46 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Effect of medium composition, flow rate, and signaling compounds on the formation of soluble extracellular materials by biofilms of *Chromobacterium violaceum*.
 L5 ANSWER 47 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Identification and analysis of an unusual TraR-binding site upstream of the *Agrobacterium tumefaciens* traM gene.
 L5 ANSWER 48 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Characterization of ***N*** - ***acyl*** ***homoserine*** ***lactone*** overproducing mutants of *Burkholderia multivorans* ATCC 17616.
 L5 ANSWER 49 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Differential survival of solitary and aggregated cells of *Pseudomonas syringae* on leaves.

L5 ANSWER 50 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Inhibition of quorum sensing in *Pseudomonas aeruginosa* biofilm bacteria by
a halogenated furanone compound.

=> d bib abs 45

L5 ANSWER 45 OF 134 AGRICOLA Compiled and distributed by the National
Agricultural Library of the Department of Agriculture of the United States
of America. It contains copyrighted materials. All rights reserved.
(2004) on STN DUPLICATE 22
AN 2002:51526 AGRICOLA
DN IND23283323
TI Quorum sensing in plant-associated bacteria.
AU Loh, J.; Pierson, E.A.; Pierson, L.S. III; Stacey, G.; Chatterjee, A.
AV DNAL (QK1.C87)
SO Current opinion in plant biology, Aug 2002. Vol. 5, No. 4. p. 285-290
Publisher: Kidlington, Oxford, UK : Elsevier Science Ltd.
CODEN: COPBFZ; ISSN: 1369-5266
NTE Includes references
CY England; United Kingdom
DT Article; Law
FS Non-U.S. Imprint other than FAO
LA English

=> d ti 51-76

L5 ANSWER 51 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI ropA, a negative regulator of phenazine biosynthesis in *Pseudomonas*
aureofaciens 30-84.

L5 ANSWER 52 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Effect of *Pseudomonas aeruginosa* quorum-sensing signal molecules on IL-8
production from human corneal epithelial cells.

L5 ANSWER 53 OF 134 CABA COPYRIGHT 2004 CABI on STN
TI Analysis of ***N*** - ***acyl*** ***homoserine*** -
lactone quorum-sensing molecules made by different strains and
biovars of *Rhizobium leguminosarum* containing different symbiotic plasmids
Developments in Plant and Soil Sciences.

L5 ANSWER 54 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Multiple ***N*** - ***acyl*** ***homoserine*** ***lactone***
signals of *Rhizobium leguminosarum* are synthesized in a distinct temporal
pattern.

L5 ANSWER 55 OF 134 CAPLUS COPYRIGHT 2004 ACS on STN
TI A second quorum-sensing system regulates cell surface properties but not
phenazine antibiotic production in *Pseudomonas aureofaciens*

L5 ANSWER 56 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI The evolution of bacterial LuxI and LuxR quorum sensing regulators.

L5 ANSWER 57 OF 134 CAPLUS COPYRIGHT 2004 ACS on STN
TI Acyl-homoserine lactone production is more common among plant-associated
Pseudomonas spp. than among soilborne *Pseudomonas* spp.

L5 ANSWER 58 OF 134 AGRICOLA Compiled and distributed by the National
Agricultural Library of the Department of Agriculture of the United States
of America. It contains copyrighted materials. All rights reserved.
(2004) on STN DUPLICATE 28
TI Transgenic plants producing the bacterial pheromone ***N*** -

acyl - ***homoserine*** ***lactone*** exhibit enhanced resistance to the bacterial phytopathogen *Erwinia carotovora*.

- L5 ANSWER 59 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Can plants manipulate bacterial quorum sensing?.
- L5 ANSWER 60 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Analysis of the microbial communities on corroded concrete sewer pipes: A case study.
- L5 ANSWER 61 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Identification of a second quorum sensing system in the biological control bacterium *Pseudomonas aureofaciens* 30-84.
- L5 ANSWER 62 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Characterization of a mutant of *Pseudomonas aureofaciens* strain 30-84 enhanced in phenazine biosynthesis.
- L5 ANSWER 63 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI gfp-based ***N*** - ***acyl*** ***homoserine*** - ***lactone*** sensor systems for detection of bacterial communication.
- L5 ANSWER 64 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Identification of bacterial quorum sensing signals in marine "whiting" communities and in cyanobacteria of the genus *Synechococcus*.
- L5 ANSWER 65 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Transcript analysis of the *cer* operon in *Rhodobacter sphaeroides* 2.4.1.
- L5 ANSWER 66 OF 134 CAPLUS COPYRIGHT 2004 ACS on STN
TI The synthesis of optically pure enantiomers of ***N*** - ***acyl*** - ***homoserine*** ***lactone*** autoinducers and their analogues
- L5 ANSWER 67 OF 134 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN DUPLICATE 32
TI Quorum sensing controls the synthesis of virulence factors by modulating *rsmA* gene expression in *Erwinia carotovora* subsp. *carotovora*.
- L5 ANSWER 68 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Multiple bacterial quorum-sensing signals produced by transgenic plants.
- L5 ANSWER 69 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Processing and export of peptide pheromones and bacteriocins in Gram-negative bacteria.
- L5 ANSWER 70 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Positive and negative communication among rhizobacteria: Effect on patterns of microbial gene expression.
- L5 ANSWER 71 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Quenching quorum sensing-dependent bacterial infection.
- L5 ANSWER 72 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Signal mimic compounds from plants can affect quorum sensing-regulated behaviors in associated bacteria.
- L5 ANSWER 73 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Detection of ***N*** - ***acyl*** ***homoserine*** ***lactone*** expression in *Legionella pneumophila*.
- L5 ANSWER 74 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

TI Interaction of *Pseudomonas aeruginosa* LasR with the lasB regulatory region.
 L5 ANSWER 75 OF 134 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN DUPLICATE 33
 TI Analysis of ***N*** - ***acyl*** ***homoserine*** - ***lactone*** quorum-sensing molecules made by different strains and biovars of *Rhizobium leguminosarum* containing different symbiotic plasmids.
 L5 ANSWER 76 OF 134 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Bacterial response to siderophore and quorum-sensing chemical signals in the seawater microbial community
 => d bib abs 72 58
 L5 ANSWER 72 OF 134 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 AN 2001:443328 BIOSIS
 DN PREV200100443328
 TI Signal mimic compounds from plants can affect quorum sensing-regulated behaviors in associated bacteria.
 AU Bauer, W. D. [Reprint author]; Teplitski, M. [Reprint author]; Gao, M. [Reprint author]
 CS Department of Horticulture and Crop Science, Ohio State University, Columbus, OH, 43210, USA
 SO Phytopathology, (June, 2001). Vol. 91, No. 6 Supplement, pp. S160. print. Meeting Info.: Joint Meeting of the American Phytopathological Society, the Mycological Society of America, and the Society of Nematologists. Salt Lake City, Utah, USA. August 25-29, 2001. American Phytopathological Society; Mycological Society of America; Society of Nematologists. CODEN: PHYTAJ. ISSN: 0031-949X.
 DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 LA English
 ED Entered STN: 19 Sep 2001
 Last Updated on STN: 22 Feb 2002
 AB ***N*** - ***acyl*** ***homoserine*** ***lactone*** (AHL) signal molecules are used by many plant-associated bacterial species to regulate the expression of their genes in relation to local population density ("quorum-sensing"). A diversity of higher plants have been found to secrete unknown, AHL signal-mimic compounds that can either stimulate or inhibit various AHL-regulated behaviors in bacteria (Teplitski et al. 2000. Molecular Plant-Microbe Interactions 13:637-648). The ability of higher plants to specifically alter AHL-regulated behaviors in bacteria by production of AHL signal-mimic compounds could be of broad consequence. AHL signaling in bacteria and the synthesis of AHL signal-mimic compounds by plants are briefly reviewed, with emphasis on some of the important questions concerning the roles that these plant signal-mimic compounds may play in natural encounters between plants and bacteria.
 L5 ANSWER 58 OF 134 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN DUPLICATE 28
 AN 2002:1578 AGRICOLA
 DN IND23240740
 TI Transgenic plants producing the bacterial pheromone ***N*** - ***acyl*** - ***homoserine*** ***lactone*** exhibit enhanced resistance to the bacterial phytopathogen *Erwinia carotovora*.
 AU Mae, A.; Montesano, M.; Koiv, V.; Palva, E.T.

SO Molecular plant-microbe interactions : MPMI, Sept 2001. Vol. 14, No. 9. p. 1035-1042
 Publisher: St. Paul, MN : APS Press, [c1987-
 CODEN: MPMIEL; ISSN: 0894-0282

NTE Includes references
 CY Minnesota; United States
 DT Article
 FS U.S. Imprints not USDA, Experiment or Extension
 LA English
 AB Bacterial pheromones, mainly different homoserine lactones, are central to a number of bacterial signaling processes, including those involved in plant pathogenicity. We previously demonstrated that N-oxoacyl-homoserine lactone (OHL) is essential for quorum sensing in the soft-rot phytopathogen *Erwinia carotovora*. In this pathogen, OHL controls the coordinate activation of genes encoding the main virulence determinants, extracellular plant cell wall degrading enzymes (PCWDEs), in a cell density-dependent manner. We suggest that *E. carotovora* employ quorum sensing to avoid the premature production of PCWDEs and subsequent activation of plant defense responses. To test whether modulating this sensory system would affect the outcome of a plant-pathogen interaction, we generated transgenic tobacco, producing OHL. This was accomplished by ectopic expression in tobacco of the *E. carotovora* gene *expI*, which is responsible for OHL biosynthesis. We show that *expI*-positive transgenic tobacco lines produced the active pheromone and partially complemented the avirulent phenotype of *expI* mutants. The OHL-producing tobacco lines exhibited enhanced resistance to infection by wild-type *E. carotovora*. The results were confirmed by exogenous addition of OHL to wild-type plants, which also resulted in increased resistance to *E. carotovora*.

=> s (homoserine lactone) and lactonase
 L6 27 (HOMOSERINE LACTONE) AND LACTONASE

=> d ti 1-27

L6 ANSWER 1 OF 27 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN
 TI Genetic control of quorum-sensing signal turnover in *Agrobacterium tumefaciens*.

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 TI Identification of quorum-quenching N-acyl homoserine lactonases from *Bacillus* species.

L6 ANSWER 3 OF 27 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Utilization of acyl- ***homoserine*** ***lactone*** quorum signals for growth by a soil *Pseudomonad* and *Pseudomonas aeruginosa* PA01.

L6 ANSWER 4 OF 27 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI The Ti plasmid of *Agrobacterium tumefaciens* harbors an attM-paralogous gene, *aiiB*, also encoding N-Acyl homoserine ***lactonase*** activity.

L6 ANSWER 5 OF 27 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Ahld, an N-acylhomoserine ***lactonase*** in *Arthrobacter* sp., and predicted homologues in other bacteria.

L6 ANSWER 6 OF 27 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Genetically programmed autoinducer destruction reduces virulence gene

expression and swarming motility in *Pseudomonas aeruginosa* PAO1.

- L6 ANSWER 7 OF 27 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Genetic control of quorum-sensing signal turnover in *Agrobacterium tumefaciens*.
- L6 ANSWER 8 OF 27 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Identification of quorum-quenching N-acyl homoserine lactonases from *Bacillus* species.
- L6 ANSWER 9 OF 27 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Quenching quorum-sensing-dependent bacterial infection by an N-acyl homoserine ***lactonase*** .
- L6 ANSWER 10 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
TI Utilization of acyl- ***homoserine*** ***lactone*** quorum signals for growth by a soil pseudomonad and *Pseudomonas aeruginosa* PAO1
- L6 ANSWER 11 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
TI The Ti plasmid of *Agrobacterium tumefaciens* harbors an attM-paralogous gene, *aiiB*, also encoding N-acyl homoserine ***lactonase*** activity
- L6 ANSWER 12 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
TI Method for accessing microbial diversity
- L6 ANSWER 13 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
TI AhLd, an N-acylhomoserine ***lactonase*** in *Arthrobacter* sp., and predicted homologues in other bacteria
- L6 ANSWER 14 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
TI Degradation of pathogen quorum-sensing molecules by soil bacteria: a preventive and curative biological control mechanism
- L6 ANSWER 15 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
TI Quorum quenching and proactive host defense
- L6 ANSWER 16 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
TI The control method of quorum sensing in gram-negative bacteria
- L6 ANSWER 17 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
TI Genes encoding the N-acyl ***homoserine*** ***lactone*** -degrading enzyme are widespread in many subspecies of *Bacillus thuringiensis*
- L6 ANSWER 18 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
TI Genetically programmed autoinducer destruction reduces virulence gene expression and swarming motility in *Pseudomonas aeruginosa* PAO1
- L6 ANSWER 19 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
TI Identification of quorum-quenching N-acyl homoserine lactonases from *Bacillus* species
- L6 ANSWER 20 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
TI Genetic control of quorum-sensing signal turnover in *Agrobacterium tumefaciens*
- L6 ANSWER 21 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
TI Quenching quorum-sensing-dependent bacterial infection by an N-acyl homoserine ***lactonase***
- L6 ANSWER 22 OF 27 CABA COPYRIGHT 2004 CABI on STN
TI Utilization of acyl- ***homoserine*** ***lactone*** quorum signals for growth by a soil pseudomonad and *Pseudomonas aeruginosa* PAO1.

L6 ANSWER 23 OF 27 CABA COPYRIGHT 2004 CABI on STN
 TI The Ti plasmid of Agrobacterium tumefaciens harbors an attM-paralogous gene, aiiB, also encoding N-acyl homoserine ***lactonase*** activity.

L6 ANSWER 24 OF 27 CABA COPYRIGHT 2004 CABI on STN
 TI AhlD, an N-acylhomoserine ***lactonase*** in Arthrobacter sp., and predicted homologues in other bacteria.

L6 ANSWER 25 OF 27 CABA COPYRIGHT 2004 CABI on STN
 TI Genetic control of quorum-sensing signal turnover in Agrobacterium tumefaciens.

L6 ANSWER 26 OF 27 CABA COPYRIGHT 2004 CABI on STN
 TI Quenching quorum-sensing-dependent bacterial infection by an N-acyl homoserine ***lactonase*** .

L6 ANSWER 27 OF 27 CABA COPYRIGHT 2004 CABI on STN
 TI Quieting the raucous crowd.

=> d bib abs 27

L6 ANSWER 27 OF 27 CABA COPYRIGHT 2004 CABI on STN
 AN 2001:129640 CABA
 DN 20013085073
 TI Quieting the raucous crowd
 AU Leadbetter, J. R.
 CS Program of Environmental Science and Engineering, California Institute of Technology, Pasadena, CA 91125-7800, USA.
 SO Nature (London), (2001) Vol. 411, No. 6839, pp. 748-749. 9 ref.
 Publisher: Nature Publishing Group. London
 ISSN: 0028-0836
 DOI: 10.1038/35081216
 CY United Kingdom
 DT Journal
 LA English
 ED Entered STN: 20011206
 Last Updated on STN: 20040216
 AB This paper discusses recent research into the degradation of acyl-
 homoserine ***lactone*** (AHL, a quorum-sensing signal produced by Erwinia sp., which causes soft rot in several crops) and its effect on the expression of quorum-regulated virulence factors. Transgenic tobacco and potato plants expressing the aiiA gene from a Bacillus sp., which encodes an AHL- ***lactonase*** , were resistant to Erwinia infection. The existence of other mechanisms for the biodegradation of AHLs, including an AHL-acylase from Variovorax paradoxus is discussed. The potential for AHL-degrading enzymes in controlling other quorum-sensing bacterial populations, such as biofilms which are implicated in many human diseases, is considered. The possible existence of an aiiA relative in the quorum sensing plant pathogen Agrobacterium tumefaciens, and the role of AHL-degrading enzymes in nature are also considered..

=> s lactonase

L7 274 LACTONASE

=> duplicate remove l7

DUPLICATE PREFERENCE IS 'AGRICOLA, BIOSIS, CAPLUS, CABA'

KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n

PROCESSING COMPLETED FOR L7

L8 202 DUPLICATE REMOVE L7 (72 DUPLICATES REMOVED)

=> d ti 1-25

- L8 ANSWER 1 OF 202 CAPLUS COPYRIGHT 2004 ACS on STN
TI Pharmacogenetics of paraoxonases: a brief review
- L8 ANSWER 2 OF 202 CAPLUS COPYRIGHT 2004 ACS on STN
TI Microbial processes for the production of chemically and biologically useful compounds
- L8 ANSWER 3 OF 202 CAPLUS COPYRIGHT 2004 ACS on STN
TI Method for accessing microbial diversity
- L8 ANSWER 4 OF 202 CAPLUS COPYRIGHT 2004 ACS on STN
TI Virulence genes of *Pseudomonas aeruginosa* and use of genes and encoded proteins to develop diagnostic and therapeutic agents
- L8 ANSWER 5 OF 202 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Utilization of acyl-homoserine lactone quorum signals for growth by a soil *Pseudomonad* and *Pseudomonas aeruginosa* PA01.
- L8 ANSWER 6 OF 202 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI The Ti plasmid of *Agrobacterium tumefaciens* harbors an attM-paralogous gene, *aiiB*, also encoding N-Acyl homoserine ***lactonase*** activity.
- L8 ANSWER 7 OF 202 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI The ascorbate transporter of *Escherichia coli*.
- L8 ANSWER 8 OF 202 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI AhlD, an N-acylhomoserine ***lactonase*** in *Arthrobacter* sp., and predicted homologues in other bacteria.
- L8 ANSWER 9 OF 202 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI ***Lactonase*** and lactonizing activities of human serum paraoxonase (PON1) and rabbit serum PON3.
- L8 ANSWER 10 OF 202 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI DUPLICATE 6
Purification and characterization of a ***lactonase*** from *Erwinia cypripedii* 314B that hydrolyzes (S)-5-oxo-2-tetrahydrofuran carboxylic acid.
- L8 ANSWER 11 OF 202 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Mouse macrophage paraoxonase 2 activity is increased whereas cellular paraoxonase 3 activity is decreased under oxidative stress.
- L8 ANSWER 12 OF 202 CAPLUS COPYRIGHT 2004 ACS on STN
TI Mouse Macrophage Paraoxonase 2 Activity Is Increased Whereas Cellular Paraoxonase 3 Activity Is Decreased Under Oxidative Stress
- L8 ANSWER 13 OF 202 CAPLUS COPYRIGHT 2004 ACS on STN
TI Quorum quenching and proactive host defense
- L8 ANSWER 14 OF 202 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Biochemical and applied studies of vitamin production by microorganisms.
- L8 ANSWER 15 OF 202 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN
TI DUPLICATE 8
Degradation of pathogen quorum-sensing molecules by soil bacteria: a preventive and curative biological control mechanism.
- L8 ANSWER 16 OF 202 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

TI Cloning and ecological significance of *aiiA* from *Bacillus cereus* UW85.

L8 ANSWER 17 OF 202 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Biosensor using glucose oxidoreductase and gluconolactonase

L8 ANSWER 18 OF 202 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Gliocladium ZES gene zearalenone esterases and cDNAs, ZES-expressing microbes, animals, and plants, and their use in zearalenone detoxification

L8 ANSWER 19 OF 202 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Identification, cloning and sequences of hydrolases and their use in kinetic resolution of enantiomers

L8 ANSWER 20 OF 202 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Ascorbic acid production from yeasts

L8 ANSWER 21 OF 202 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Methods for identifying therapeutic targets for treating infectious disease

L8 ANSWER 22 OF 202 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Protein and cDNA sequences of lysophospholipase from *Fusarium venenotum* and *Fusarium verticillioides* and related expression vectors

L8 ANSWER 23 OF 202 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Protein and cDNA sequences of *Fusarium venenotum* lactonohydrolase and expression vectors

L8 ANSWER 24 OF 202 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Process for the production of fructan from sucrose with enzymes from *Zymomonas mobilis*

L8 ANSWER 25 OF 202 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Genes coding for a new pathway of aerobic benzoate metabolism in *Azoarcus evansii*

=> s l8 and (plant or maize or tobacco or arabidopsis)
 L9 14 L8 AND (PLANT OR MAIZE OR TOBACCO OR ARABIDOPSIS)

=> d ti 1-14

L9 ANSWER 1 OF 14 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN
 TI Degradation of pathogen quorum-sensing molecules by soil bacteria: a preventive and curative biological control mechanism.

L9 ANSWER 2 OF 14 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Cloning and ecological significance of *aiiA* from *Bacillus cereus* UW85.

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 TI The Ti plasmid of *Agrobacterium tumefaciens* harbors an *attM*-paralogous gene, *aiiB*, also encoding N-Acyl homoserine ***lactonase*** activity.

L9 ANSWER 4 OF 14 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI AhlD, an N-acylhomoserine ***lactonase*** in *Arthrobacter* sp., and predicted homologues in other bacteria.

L9 ANSWER 5 OF 14 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Quenching quorum-sensing-dependent bacterial infection by an N-acyl homoserine ***lactonase***.

L9 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN
TI Quorum quenching and proactive host defense

L9 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN
TI Gliocladium ZES gene zearalenone esterases and cDNAs, ZES-expressing microbes, animals, and plants, and their use in zearalenone detoxification

L9 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN
TI Genes encoding the N-acyl homoserine lactone-degrading enzyme are widespread in many subspecies of *Bacillus thuringiensis*

L9 ANSWER 9 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN
TI Ascorbic acid production from yeasts

L9 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN
TI Quenching quorum-sensing-dependent bacterial infection by an N-acyl homoserine ***lactonase***

L9 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN
TI Fodder additive to deactivate mycotoxins

L9 ANSWER 12 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN
TI Enzyme and metabolite profiles of the pentose phosphate pathway in hypocotyls of *Phaseolus mungo* seedlings

L9 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2004 ACS on STN
TI Enzymic formation of ascorbic acid in rat-liver extracts

L9 ANSWER 14 OF 14 CABA COPYRIGHT 2004 CABI on STN
TI Quieting the raucous crowd.

=> s autoinducer and inactivation
L10 27 AUTOINDUCER AND INACTIVATION

=> d ti 1-27

L10 ANSWER 1 OF 27 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN
TI Identification of quorum-quenching N-acyl homoserine lactonases from *Bacillus* species.

L10 ANSWER 2 OF 27 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Lsr-mediated transport and processing of Al-2 in *Salmonella typhimurium*.

L10 ANSWER 3 OF 27 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI ***Autoinducer*** 2 activity in *Escherichia coli* culture supernatants can be actively reduced despite maintenance of an active synthase, LuxS.

L10 ANSWER 4 OF 27 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI luxS and arcB control aerobic growth of *Actinobacillus actinomycetemcomitans* under iron limitation.

L10 ANSWER 5 OF 27 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI LuxS-based signaling in *Streptococcus gordonii*: ***Autoinducer*** 2 controls carbohydrate metabolism and biofilm formation with *Porphyromonas gingivalis*.

L10 ANSWER 6 OF 27 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Importance of the luxS gene product (***autoinducer*** -2) of rabbit enteropathogenic *Escherichia coli* RDEC-1 in regulation of virulence

properties in vitro and in vivo.

- L10 ANSWER 7 OF 27 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Identification of quorum-quenching N-acyl homoserine lactonases from
Bacillus species.
- L10 ANSWER 8 OF 27 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Functional genomics approach to identifying genes required for biofilm
development by Streptococcus mutans.
- L10 ANSWER 9 OF 27 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Signaling system in Porphyromonas gingivalis based on a luxS protein.
- L10 ANSWER 10 OF 27 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI AiiA, an enzyme that inactivates the acylhomoserine lactone quorum-sensing
signal and attenuates the virulence of Erwinia carotovora.
- L10 ANSWER 11 OF 27 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Sequence and function of LuxU: A two-component phosphorelay protein that
regulates quorum sensing in Vibrio harveyi.
- L10 ANSWER 12 OF 27 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI The global activator GacA of Pseudomonas aeruginosa PAO positively
controls the production of the ***autoinducer*** N-butyryl-homoserine
lactone and the formation of the virulence factors pyocyanin, cyanide, and
lipase.
- L10 ANSWER 13 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
TI Lsr-mediated transport and processing of Al-2 in Salmonella typhimurium
- L10 ANSWER 14 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
TI ***Autoinducer*** 2 activity in Escherichia coli culture supernatants
can be actively reduced despite maintenance of an active synthase, LuxS
- L10 ANSWER 15 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
TI luxS and arcB control aerobic growth of Actinobacillus
actinomycetemcomitans under iron limitation
- L10 ANSWER 16 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
TI LuxS-based signaling in Streptococcus gordonii: ***autoinducer*** 2
controls carbohydrate metabolism and biofilm formation with Porphyromonas
gingivalis
- L10 ANSWER 17 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
TI Method for controlling pathogenic bacterial quorum-sensing by aiiA gene
expression in transgenic tobacco and potato plants
- L10 ANSWER 18 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
TI Identification of quorum-quenching N-acyl homoserine lactonases from
Bacillus species
- L10 ANSWER 19 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
TI Functional genomics approach to identifying genes required for biofilm
development by Streptococcus mutans
- L10 ANSWER 20 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
TI Bacterial strains and genes encoding ***autoinducer***
inactivation protein for control of bacterial diseases by
quenching quorum-sensing signals
- L10 ANSWER 21 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
TI Signaling system in Porphyromonas gingivalis based on a LuxS protein

L10 ANSWER 22 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Cloning of a Bacillus ***autoinducer*** ***inactivation*** protein
 AiiA gene and its mutagenesis and expression for agricultural application

L10 ANSWER 23 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Quorum sensing in the plant pathogen Erwinia carotovora subsp. carotovora:
 the role of expREcc

L10 ANSWER 24 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
 TI ***Autoinducer*** synthase gene railI of Rhizobium and methods for
 increasing nodule number and nitrogen fixation in Leguminosae

L10 ANSWER 25 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Sequence and function of LuxU: a two-component phosphorelay protein that
 regulates quorum sensing in Vibrio harveyi

L10 ANSWER 26 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Characterization of the Erwinia chrysanthemi expI-expR locus directing the
 synthesis of two N-acyl-homoserine lactone signal molecules

L10 ANSWER 27 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
 TI The global activator GacA of Pseudomonas aeruginosa PAO positively
 controls the production of the ***autoinducer*** N-butyryl-homoserine
 lactone and the formation of the virulence factors pyocyanin, cyanide, and
 lipase

=> s Lian-Hui, Z?/au
 L11 3 LIAN-HUI, Z?/AU

=> d ti 1-3

L11 ANSWER 1 OF 3 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Quenching quorum sensing-dependent bacterial infection.

L11 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Rapid evaluation on activity of pozzolanic materials

L11 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Morphology of interface between zeolite aggregate and cement paste

=> s Zhang, Lian-Hui/au
 L12 33 ZHANG, LIAN-HUI/AU

=> duplicate remove l12
 DUPLICATE PREFERENCE IS 'BIOSIS, CAPLUS'
 KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n
 PROCESSING COMPLETED FOR L12
 L13 19 DUPLICATE REMOVE L12 (14 DUPLICATES REMOVED)

=> d ti 1-19

L13 ANSWER 1 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN
 TI A bacterial cell-cell communication signal with cross-kingdom structural
 analogues

L13 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Cloning, characterization and sequence of Ralstonia AHL acylase and use
 for treatment of bacterial infection in mammals and plants

L13 ANSWER 3 OF 19 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI Isomaltulose synthase (PalI) of Klebsiella sp. LX3. Crystal structure and

implication of mechanism.

- L13 ANSWER 4 OF 19 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Utilization of acyl-homoserine lactone quorum signals for growth by a soil
Pseudomonad and *Pseudomonas aeruginosa* PA01.
- L13 ANSWER 5 OF 19 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Acyl-homoserine lactone acylase from *Ralstonia* strain XJ12B represents a
novel and potent class of quorum-quenching enzymes.
- L13 ANSWER 6 OF 19 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Microbial diversity and prevalence of virulent pathogens in biofilms
developed in a water reclamation system.
- L13 ANSWER 7 OF 19 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Identification of the essential histidine residue for high-affinity
binding of Alba protein to albicidin antibiotics.
- L13 ANSWER 8 OF 19 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Quorum quenching and proactive host defense.
- L13 ANSWER 9 OF 19 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Cloning and characterization of a novel lipase from *Vibrio harveyi* strain
AP6.
- L13 ANSWER 10 OF 19 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI A motif rich in charged residues determines product specificity in
isomaltulose synthase.
- L13 ANSWER 11 OF 19 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Expression, crystallization and preliminary X-ray analysis of isomaltulose
synthase (PalI) from *Klebsiella* sp. LX3.
- L13 ANSWER 12 OF 19 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Cloning and characterization of a metalloprotease from *Vibrio harveyi*
strain AP6.
- L13 ANSWER 13 OF 19 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Genetic control of quorum-sensing signal turnover in *Agrobacterium*
tumefaciens.
- L13 ANSWER 14 OF 19 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Isomaltulose synthase from *Klebsiella* sp. strain LX3: Gene cloning and
characterization and engineering of thermostability.
- L13 ANSWER 15 OF 19 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Identification of quorum-quenching N-acyl homoserine lactonases from
Bacillus species.
- L13 ANSWER 16 OF 19 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Quenching quorum-sensing-dependent bacterial infection by an N-acyl
homoserine lactonase.
- L13 ANSWER 17 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN
TI Isolation of isomaltulose-producing bacteria *Klebsiella singaporensis*,
cloning and sequence of an isomaltulose synthase gene and a method for
production of isomaltulose in a transgenic plant
- L13 ANSWER 18 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN
TI Cloning of a *Bacillus* autoinducer inactivation protein AiiA gene and its
mutagenesis and expression for agricultural application
- L13 ANSWER 19 OF 19 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

DUPLICATE 14

TI AiiA, an enzyme that inactivates the acylhomoserine lactone quorum-sensing signal and attenuates the virulence of *Erwinia carotovora*.

=> d bib abs 8 2

L13 ANSWER 8 OF 19 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 6

AN 2003:303339 BIOSIS

DN PREV200300303339

TI Quorum quenching and proactive host defense.

AU ***Zhang, Lian-Hui*** [Reprint Author]

CS Institute of Molecular and Cell Biology, 30 Medical Drive, Singapore,
117609, Singapore
lianhui@imcb.a-star.edu.sg

SO Trends in Plant Science, (May 2003) Vol. 8, No. 5, pp. 238-244. print.
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DT Article

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AB Both plants and humans have inducible defense mechanisms. This passive defense strategy leaves the host unprotected for a period of time until resistance is activated. Moreover, many bacterial pathogens have evolved cell-cell communication (quorum-sensing) mechanisms to mount population-density-dependent attacks to overwhelm the host's defense responses. Several chemicals and enzymes have been investigated for years for their potential to target the key components of bacterial quorum-sensing systems. These quorum-quenching reagents, which block bacterial cell-cell communications, can disintegrate a bacterial population-density-dependent attack. It has now been shown that a quorum-quenching mechanism can be engineered in plants and might be used as a strategy in controlling bacterial pathogens and to build up a proactive defense barrier.

L13 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2004 ACS on STN

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TI Cloning, characterization and sequence of *Ralstonia* AHL acylase and use for treatment of bacterial infection in mammals and plants

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SO PCT Int. Appl., 51 pp.

CODEN: PIXXD2

DT Patent

LA English

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PI	WO 2003068951	A1	20030821	WO 2002-SG11	20020123
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	PRAI WO 2002-SG11		20020123		

AB This invention provides a gene, qsbA, which encodes a protein useful for inactivating certain bacterial quorum sensing signal mols. (N-acylhomoserine lactones) which participate in bacterial virulence and biofilm differentiation pathways. This N-acylhomoserine lactone acylase gene was isolated from Ralstonia sp., strain XJ12B. The nucleotide sequence of the gene qsbA and the amino acid sequence of the encoded N-acylhomoserine lactone acylase are provided. The gene and enzyme of the invention are useful in controlling bacterial infections in mammals and plants.

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